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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/767,991	01/23/2001	Satoshi Sakamoto	0828.65156	2487

24978 7590 01/28/2004

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CHICAGO, IL 60606

EXAMINER

NGUYEN, ANH T

ART UNIT	PAPER NUMBER
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2127

DATE MAILED: 01/28/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/767,991

Applicant(s)

SAKAMOTO, SATOSHI

Examiner

Anh T Nguyen

Art Unit

2127

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-6 are presented for examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3, and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Guedalia at al., USPN 6,535,878 (hereinafter Geudalia).
3. As per claim 1, Geudalia teaches the invention substantially as claimed including an apparatus which creates and executes a thread by request from an application program comprising:
 - a thread-creation request receiving unit which receives a request for creation of a thread (col.4, lines 32-33);
 - a thread creation unit which creates a thread in response to the request received (col.4, lines 33-34);

a first thread execution unit which executes said thread created by said thread creation unit (see Abstract, process the request using one of a plurality of threads);

a thread-creation-request holding unit(i.e. queue) which holds said request received by said thread-creation-request receiving unit, when said thread creation unit fails in creation of said thread (col.4, lines 38-41, when the maximum limit of allowable requests is reached, subsequent requests are queued); and

a second thread execution unit which executes processing corresponding to said request held by said thread-creation-request holding unit (col.4, lines 40-41, pending availability of a free thread). When the creation unit fails to create a thread because the threshold of allowable requests have been reached, the requests are placed in a holding queue and the next available execution unit will execute that request.

4. Claim 3 is directed to a method claim of claim 1. It is rejected for the same reasons as claim 1 set forth hereinabove.

5. Claim 5 is directed to a computer-readable storage medium of claim 1. It is for rejected for the same reasons as claim 1 set forth hereinabove.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 4, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guedalia et al., USPN 6,535,878 (hereinafter Geudalia) in view of Jaggannathan et al., USPN 5,692,193(hereinafter Jaggannathan).

8. As per claim 2, Geudalia teaches when execution of another thread by said first thread execution unit is completed, said second thread execution unit executes said processing corresponding to said request held by said thread-creation-request holding unit (col.4, lines40-41, subsequent requests are queued pending availability of a free thread), without newly creating a thread in response to said request held by said thread-creation-request holding unit.

Geudalia does not explicitly teach reusing an arrangement which is provided for supporting and managing previous thread.

Jaggannathan teaches reusing an arrangement which is provided for supporting and managing previous thread (col.14, line 19, lines 25-27, thread control blocks are recyclable resources and if a thread has terminated, its context is available for immediate re-allocation).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Geudalia and Jaggannathan because Jaggannathan's reuse of thread arrangement would optimize and improve Geudalia's system performance by limiting the number of concurrent threads running (col.4, line26-27) and increases efficiency by reusing the same execution context of a previously executed thread (col.14, lines 9, 17-18).

9. Claim 4 is directed to a method claim of claim 2. It is rejected for the same reasons as claim 2 set forth hereinabove.

10. Claim 6 is directed to a computer-readable storage medium of claim 2. It is for rejected for the same reasons as claim 2 set forth hereinabove.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh T Nguyen whose telephone number is (703) 305-8649. The examiner can normally be reached on Monday-Friday from 7:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An, can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-5484.

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Anh T. Nguyen

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January 16, 2004



MENG-AL T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100